

**METHOD AND APPARATUS FOR SELECTING A MODULATION AND  
CODING SCHEME IN A WIRELESS COMMUNICATION SYSTEM**

**ABSTRACT OF THE DISCLOSURE**

5

In a wireless communication system, a scheduler (100) determines (306) a first set of modulation and coding schemes (MCSs), each of which produces a maximum data rate for a first user, in accordance with available resource constraints (304) of the wireless communication system. The scheduler then forms, for each

10 MCS of the first set, a second set of MCSs that produces the maximum data rate for a second user in accordance with a first residual resource (314) that remains when applying that MCS to the first user, thereby producing (316) a group of second sets of MCSs. After producing the group of second sets, the scheduler selects (324), from the first set and for the first user, a first optimal MCS corresponding to one of the group

15 of second sets that allows a highest maximum data rate for the second user.